



Columbus Municipal Airport
Sidewalk Project
Columbus, Indiana

Prepared for

Columbus Board of Aviation Commissioners
4770 Ray Boll Boulevard
Columbus, IN 47203

January 2014

Prepared by

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CBBEL Project No. 13-0488.00000

Columbus Municipal Airport Sidewalk Project

January 10, 2014

The Columbus Board of Aviation Commissioners (BOAC) has retained Christopher B. Burke Engineering, LLC to prepare a draft plan for a system of sidewalks, sidepaths, and/or trails as required by the Columbus Municipal AirPark Planned Unit Development (PUD). This report contains that draft plan and supporting documentation.

1.0 Background

The BOAC developed and approved the PUD in January, 2009, which was subsequently revised in 2011 and 2013. The PUD and revisions were approved by the Columbus Plan Commission.

“Planned Unit Development regulations are intended to encourage innovations in land development techniques so that unique opportunities and circumstances may be met with greater flexibility.”
(Columbus Zoning Ordinance page 5-2.)

The PUD requires that “an 8-foot wide paved sidepath shall connect any student housing with other area paths and the higher education campus ...”. The PUD also requires that “the sidepath network shall be installed in its entirety in conjunction with any student housing developments and shall be 100% complete prior to occupancy of any student housing”.

The BOAC has recently approved a lease with Bluffstone LLC to construct and operate a student housing development in the southwest quadrant of the intersection of Poshard Drive and Ray Boll Boulevard. The construction of the Bluffstone project is expected to be completed in 2014.

2.0 PUD Requirements

The Airpark PUD specifically requires the following:

- A 5-foot separation or “tree lawn” from the edge of the street (including shoulder) (p.29).
- An 8-foot wide sidepath shall be constructed to “connect any student housing with other area paths and the higher education campus via (1) the existing sidepath at the northeast corner of the intersection of Ray Boll Boulevard and Poshard Drive, (2) the existing sidepath on the west side of Kelly Street, and (3) the existing sidepath located between Ivy Tech’s Poling Hall and Harrison College”. (p.29)
- An 8-foot wide sidepath shall be constructed to “connect any student housing with any existing retail uses”. (p.29) This section does not apply at this time, since there is no retail use in place.
- Sidepaths must be paved (p.29). Traditionally in Columbus, sidepaths have been paved with concrete or asphalt.
- Lighting is not required for the sidepaths.

- Street trees are not required, as part of the sidepath installation (p. 36). However, if any street plantings are proposed, they will require approval by the Columbus Board of Public Works and Safety. (p. 36)
- Crosswalk locations and designs shall “meet the specifications of the City Engineer and be subject to approval by the Columbus Board of Public Works and Safety” (p.29).
- All sidewalks and sidepaths “installed within the Columbus Municipal AirPark PUD shall be in compliance with all applicable standards adopted by the Board of Public Works and Safety and the Americans with Disabilities Act” (ADA).

3.0 Other Requirements

All work within the public right-of-way must be permitted by the City Engineer and/or the Board of Public Works and Safety (City Code Sec. 13.04).

- Construction details of sidepath installation shall be approved by the City Engineer’s Office. This will include any modifications to the drainage system, including ditches, swales, culverts, and drywells.
- It is not anticipated that more than one acre of land will be disturbed during the construction of these sidepaths. Therefore, a Rule 5 Notice of Intent (NOI) will not be required. However, the contractor should be required to minimize the disturbed area and take steps to minimize erosion and sedimentation.
- Minor adjustments to existing utilities should be anticipated. Any required utility adjustments or relocations must be coordinated with the individual utility companies and are subject to permitting by the City Engineer’s Office.

4.0 Design and Construction Challenges

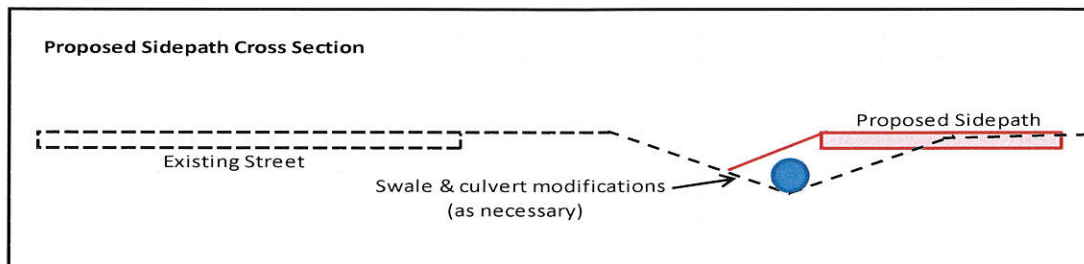
The following challenges are anticipated in the design and construction of the sidepaths:

- There are two obstructions within the right-of-way that will likely affect the sidepath installation (See Exhibit 1 Sidepath Locations). It appears that the sidepath location may be adjusted in order to install and maintain the sidepath without relocations of these encroachments.
 - Harrison College sign – This sign is believed to be illegally located within the public right-of-way.
 - AT&T boxes at the south edge of Ivy Tech – This utility installation is believed to be allowed by previous permit.
- Some proposed locations will necessitate the installation of the paths within easements (utility, access and utility, or utility and grading). This does not seem to be a problem since the Airport is the owner of all affected properties.
- The connection to the existing People Trail on the southern edge of Ivy Tech will not be located within an easement or R/W. This does not seem to be a problem since the Airport is the owner of the affected property.
- The sidepath installation will include modifications to the drainage system, including ditches and swales. A similar modification was completed in 2005 along the east side of Ray Boll Boulevard between Grissom Drive and Poshard Drive as part of the Haw Creek Trail construction. Based on

observations during recent significant rain events (including December 21, 2013), it appears that the existing granular soils and modified swales will have adequate capacity to accommodate design storms.

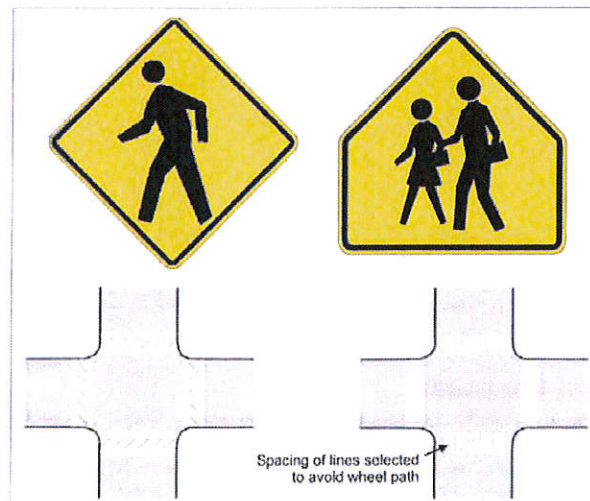
5.0 Proposed Conceptual Design

- **Sidewalk Design** – The proposed design calls for the 8 foot wide sidepaths to be installed within the public rights-of-way, with the edge of the sidepaths at or near the right-of-way line. The sidepaths are to be separated from the “adjacent street pavement (including shoulders) by a ‘tree lawn’ area that is a minimum of 5 feet in width”. The sidepath locations are identified on Exhibit 1.



- **Street Crossings** – Sidewalk connections and crosswalks shall be installed at each intersection (as shown on Exhibits 2 – 4) and should meet the Level 2 requirements as shown in the Columbus, Indiana Bicycle and Pedestrian Plan, Adopted May 12, 2010, and as follows:
 - **Pavement Markings** – Pavement markings should “include hatching (ladder or zebra designs)”. All pavement markings should be thermoplastic material for improved visibility and longevity (not a code requirement, but generally preferred by City Engineer and Traffic Department)).

*Suggested Level 2
Crosswalk Markings and
Signage*



- Warning Signs – Warning signs should be installed at each crossing (W11-2 with W16-7P arrow) and in advance of the crosswalks (W11-2). One advance warning sign may be used for multiple crosswalks to avoid clutter from excessive signage.



W11-2



W16-7P

- Higher Level Pedestrian Crossings (Future) – If warranted in the future, crosswalk beacons, rapid rectangular flashing beacons (RRFB), or pedestrian hybrid beacons (HAWK) may be installed with the approval of the Board of Public Works and Safety. It is anticipated that the Central Avenue crossing would be the first in this study area to warrant further consideration of such beacons.

6.0 Existing Street Rights-of-Way

The intent of the PUD is that the sidepaths be installed within the existing public rights-of-way. The existing right-of-way width for each affected street is as follows:

Ray Boll (South of Poshard)	60'
Ray Boll (North of Poshard)	100'
Poshard (Ray Boll to Wade)	100'
Poshard (Wade to Central)	Varies 93' – 96'
Kelly St.	50'

The existing right-of-way widths appear to be adequate for the installation of sidepaths to comply with the PUD.

7.0 Lighting

No lighting is required or planned for the sidepaths. If additional lighting is deemed necessary, the first option would be to request increased street lighting through Columbus Board of Public Works and Safety.

8.0 On-Site Meeting

A preliminary review and site visit was conducted on November 19, 2013 with the following people in attendance:

- Brian Payne, Airport Director
- Jeff Bergman, Planning Director
- Steve Rucker, Asst. City Engineer
- Ben Wagner, Park and Recreation Director
- David Hayward, CBBEL

This report reflects the consensus of the attendees as expressed at that meeting.

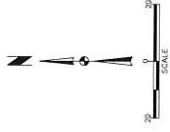
9.0 Proposal for Engineering Services

As requested, we have prepared a proposal for engineering services, including a fee estimate. The proposal covers the items necessary to complete the design for construction of the project, including topographic survey, drainage design (including ditches and culverts), ADA compliance, intersection treatments, permits from the City Engineer or Board of Public Works and Safety, and compliance with zoning and PUD requirements. The proposal is attached to this report as Appendix A.

10.0 Preliminary Opinion of Probable Construction Cost

Sidepath Cost Estimate					
Location	Side of Street	From	To	Sidewalk Length	Drainage Revisions
Ray Boll	East	Poshard	South Bluffstone PL	335	1500
Poshard	South	Ray Boll	Kelly	565	2500
Poshard	North	Kelly	Ivy Tech	615	2500
Poshard	North	Ivy Tech	Central	760	3500
Kelly	West	Poshard	Trail	500	2500
Ivy Tech Connection				10	0
Ivy / Harrison Connection				210	0
Total				2995	12500
Unit Cost				\$6/SFT	
Total Estimated Cost				\$ 143,760	\$ 12,500
Street Crossing Cost Estimate					
Intersection	Sidewalk	Curb Ramps	Crosswalk	Signs*	
Poshard & Ray Boll	40x8	4	110	7	
Poshard & Kelly	0	2	42	2	
Poshard & Central	0	5	200	7	
Total Quantities	320	11	352	16	
Unit Cost	\$3	\$1,200	\$14	\$100	
Total Cost	\$960	\$13,200	\$4,928	\$1,600	\$ 20,688
COST SUMMARY					
Sidewalks				\$	143,760
Drainage Revisions				\$	12,500
Street Crossings				\$	20,688
Contingency				\$	10,000
Total Estimated Construction Cost				\$	186,948
* Assumes installation by City Traffic Dept.					
Unit prices derived from 2013 bids received by City Engineer's Office.					

Exhibits

COLUMBUS MUNICIPAL AIRPORT
SIDEWALK PROJECT

RAY BOLL BLVD. AND POSHARD DR.
INTERSECTION

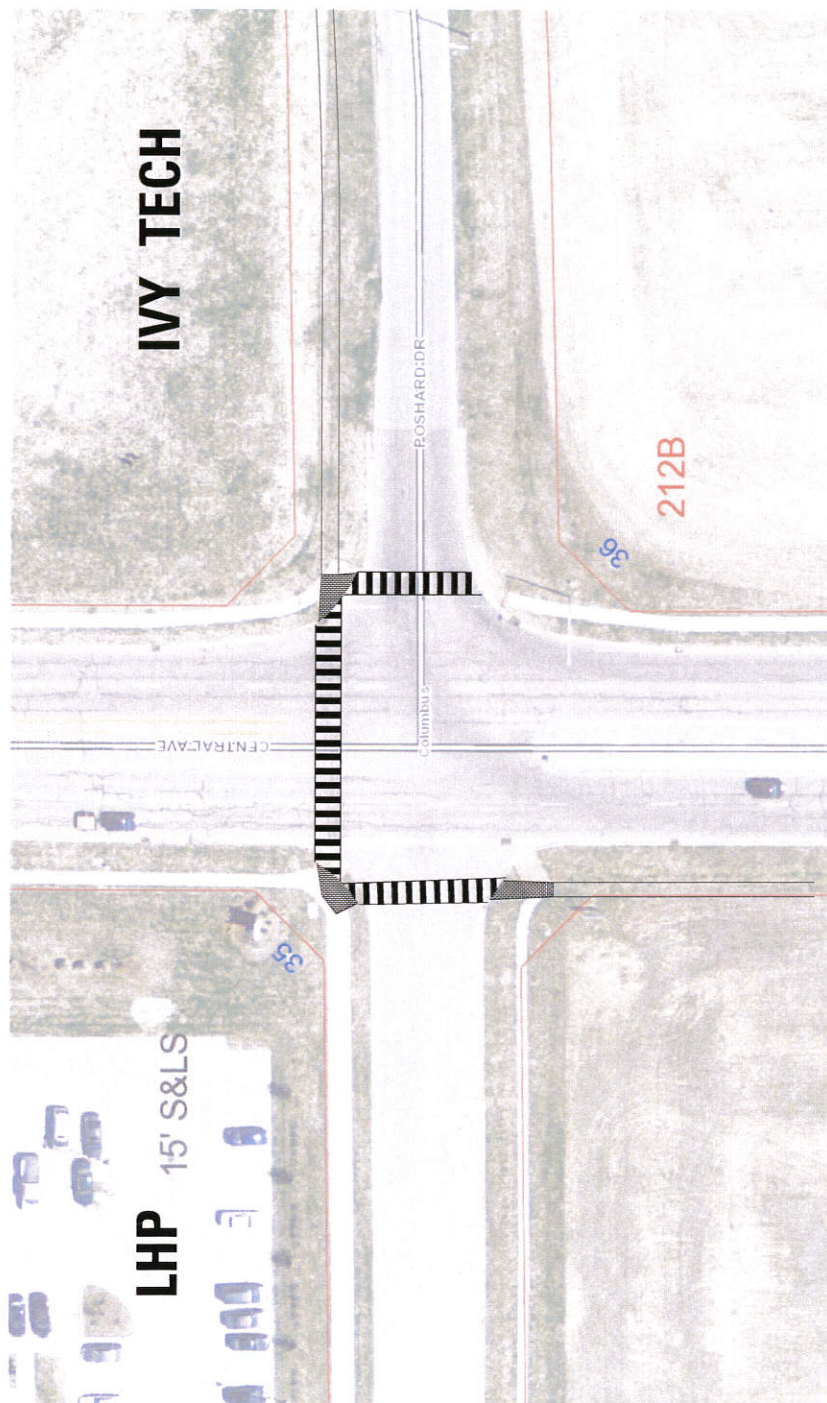
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PROJECT NO.
13-0406
SHEET 2 OF 4
DRAWING NO.

EXH-2





NOTE: WORK AT THE INTERSECTION OF CENTRAL AND POSHARD IS NOT REQUIRED AT THIS TIME.

 CHRISTOPHER B. BURKE ENGINEERING, LLC PNC Center, Suite 1398 South 115 West Washington Street Indianapolis, Indiana 46204 (317) 266-9000 FAX: (317) 632-3306	COLUMBUS MUNICIPAL AIRPORT SIDEWALK PROJECT		PROJECT NO. 13-0488 SHEET # OF 4 DRAWING NO.	
	PROJECT TITLE CENTRAL AVE. AND POSHARD DR. INTERSECTION		EXH-4	